ORIGINAL

EXCEPTION

0000174806

Thomas A. Loquvam
Pinnacle West Capital Corporation
400 North 5th Street, MS 8695
Phoenix, Arizona 85004
Tel: (602) 250-3630
E-Mail: Thomas.Loquvam@pinnaclewest.com

Raymond S. Heyman
Snell & Wilmer
400 E. Van Buren St. #1900
Phoenix, AZ 85004-2202
Tel: (602) 382-6202
E-Mail: rheyman@swlaw.com

Attorneys for Arizona Public Service Company

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

IN THE MATTER OF THE COMMISSION'S INVESTIGATION OF VALUE AND COST OF DISTRIBUTED GENERATION.

DOCKET NO. E-00000J-14-0023

ARIZONA PUBLIC SERVICE COMPANY'S EXCEPTIONS TO RECOMMENDED OPINION AND ORDER

The Commission has been grappling with the cost and value of distributed generation since 2012. As part of several proceedings, the Commission has held a multitude of hearings and public comment sessions; heard weeks of testimony from dozens of witnesses; and received thousands of pages of documents, exhibits, and briefs. The Commission has proceeded slowly and carefully. One proceeding after another,

substantive progress in addressing the cost shift was deferred to collect more information and provide stakeholders more opportunities to offer and prove their perspectives. In light of this history, the ROO finds that it is finally time to establish a path forward:

> The record in this proceeding is the culmination of years of argument and debate on this issue.... ***It is time to provide certainty and a path forward to resolve disputes surrounding the successful integration of DG*** with the utility's electrical systems in an economic and fair manner.[1]

APS agrees. We need to decide how we are going to integrate DG with utility systems in an economic and fair manner now, rather than delay this decision further. Customers and the solar industry will benefit from clarity on how this integration will unfold. After years of gathering information, the Commission has the opportunity to again demonstrate leadership on issues related to solar and distributed technologies by determining, now, how utilities should transition away from full retail rate net metering.

To APS's knowledge, this proceeding is the first time that the "value of solar" has actually been litigated. So far, national debate regarding the value of solar has largely consisted of white papers—opinions offered by hired advocates away from the harsh light of academic (much less judicial) scrutiny. In this proceeding, however, the parties were required to establish the "value of solar" through expert testimony, sworn under oath and subject to cross examination. In light of this sworn and examined testimony, the ROO offers several conclusions that merit special attention:

- Establishing a value of solar based on "a 20 to 30 year forecast would incorporate inherently speculative data based on factors that could be easily manipulated";[2]
- A five-year forecast of tangible avoided costs "provides a way to successfully and reasonably identify and analyze the costs and capacity savings from generation, transmission and distribution resulting from rooftop solar exports";[3]
- This five-year forecast will capture the full value of DG over the expected life of a DG asset: "future changes in the value of DG will not be lost due to short-term forecasts, because the value will be re-assessed in each rate

[1] ROO at page 143 (emphasis added).
[2] ROO at page 148.
[3] ROO at page 148.

case as time goes on, in order to inform the Commission's determination on setting an appropriate compensation rate for exports";[4]

- The "use of utility scale solar obligations represents the most reliable and objective proxy for rooftop solar by diminishing concerns that societal and environmental factors, as well as other externalities, should be included in the equation";[5]
- "...quantifying the societal and economic development benefits of DG in an avoided cost forecast, as proposed by Vote Solar and TASC, is a speculative endeavor that has no place in ratemaking";[6] and,
- "It is undisputed that rooftop solar customers are different from the average residential customer in that they supply a portion of their own energy needs and are thus partial requirements customers."[7]

These proposed findings emerged from a large volume of data, testimony, exhibits, and cross examination. They are the product of years of debate. And they lay the foundation for slowly transitioning away from the massive subsidies currently being provided to an industry that no longer needs full retail rate net metering to thrive.

APS would like to recognize the Administrative Law Judge and Commission Staff for their hard work in this proceeding. These issues are important, and their hard work has done much to further public policy dialogue in Arizona. Although the ROO lays out a slow transition away from net metering-related subsidies, APS believes certain issues would benefit from additional consideration. Accordingly, APS offers exceptions and seeks clarification about certain aspects of the ROO as discussed below.

I. READING THE SELECTED METHODOLOGIES TOGETHER, IT IS CLEAR THAT AVOIDED COST IS THE LONG-TERM GOAL.

The ROO concludes that the best and most reasonable way to establish the value of DG is to use both Staff's Avoided Cost and Resource Comparison Proxy (RCP) Methodologies.[8] The ROO indicates that the Avoided Cost Methodology should be used to "inform a determination on an appropriate level of compensation to be paid to DG

[4] ROO at page 149.
[5] ROO at page 149.
[6] ROO at page 150.
[7] ROO at page 145.
[8] ROO at ¶ 144, page 167.

customers for their exports to the grid."[9] It also provides that the RCP Methodology should be used to develop a "proxy for rooftop solar generation."[10]

Reading these two purposes together in a way that gives full meaning to both, it appears that the outcome of the Avoided Cost Methodology is intended to be the long-term goal of what utilities pay for exported rooftop solar energy. Until that time, the price paid for exported rooftop solar energy should be established by the RCP Methodology, as that price is adjusted from time to time. As time progresses, and costs decline, the RCP Methodology will begin producing values closer to the values produced by the Avoided Cost Methodology, and the two will essentially merge. At that time, the long-term goal of having customers only pay actual avoided cost for exported rooftop solar energy will have been achieved. To the extent that clarity is needed on this topic, APS respectfully requests that the ROO be amended to clarify that the outcome of the Avoided Cost Methodology is intended to be the long-term goal of what utilities pay for exported rooftop solar energy.

II. THE PERIOD FOR REFRESHING THE DG VALUE WOULD CAUSE SHARP CHANGES AND PROLONG SUBSIDIES.

APS recognizes that a degree of gradualism is needed to shift from the status quo. To achieve that gradualism, the Commission may determine that starting at a rate as high as 10.9 cents per kWh is appropriate in APS's service territory.[11] But the ROO essentially proposes to lock in this amount, and preclude further adjustments to the value of DG, until a utility's next rate case. Waiting until a rate case to adjust the DG value, however, could cause sharper fluctuations in the value of DG at one time than would have been the case had more frequent adjustments been made instead.

The RCP Methodology is designed as a five-year rolling average that produces a blended average cost of all grid-scale solar photovoltaic installed on the utility's system. As time progresses, that average will roll forward. More expensive, "early-adoption"

[9] ROO at ¶ 145, pages 167-68.
[10] ROO at ¶ 146, page 168.
[11] *See* ROO at page 116.

grid-scale facilities will fall out of the average and (presumably) less expensive projects will take their place. As the ROO notes, this rolling average will permit a gradual reduction in the amount utility customers pay for rooftop solar energy:

> The adoption of a rolling five year average of utility-scale solar PPAs is likely to gradually reduce the cost to utilities of purchasing rooftop solar energy over time, as older contracts are removed from the proxy analysis and newer, lower-cost, PPAs are included in the mix of solar contracts analyzed in the proxy group.[12]

APS's concern is that waiting for rate cases to recalculate the value of solar would risk sharp changes to the compensation, causing unnecessary disruption to customers and the solar industry. If a utility does not file a rate case for five years, the proxy group of grid-scale solar facilities used to calculate the value of solar will have been almost entirely swapped out. Instead of being averaged in with multiple years of higher-cost, "legacy" grid-scale facilities, the new, reduced-cost facilities will all be calculated together at a single time. The effect on the value of solar could be dramatic, with potentially significant consequences for the solar industry and customers.

APS believes that a better approach is to recalculate the value of DG each year in a process similar to many of APS's current adjustor mechanisms. This would involve updating the RCP and Avoided Cost calculations annually through a formula process. The formulas themselves—the assumptions and weighting that drive the final values—would be subject to change in a rate case. It is only the outcome of the formulas that would be updated annually, subject to verification of data by Commission Staff. A more consistent process of updating from time to time would permit smaller fluctuations between rate cases and would blunt the impact of sharp changes to the value of DG.

A streamlined administrative process, that does not involve litigation, would also address a significant issue in the ROO as written: the burden on Commission Staff. As written, the ROO would impose upon Commission Staff a near-impossible obligation to continually engage in complex administrative processes for ***each*** affected utility,

[12] ROO at page 149.

potentially overwhelming Staff and preventing the timely processing of other matters. Moreover, nearly everything about the value of DG has been controversial. Parties have not been shy about litigating the smallest details. We recommend that a different approach be adopted to prevent the potential abuse of litigation and procedure in future value of DG calculations, an outcome that would be particularly burdensome on Commission Staff.

As a final note, APS believes that more frequent updates to the value of DG would afford better protection to non-DG customers who are currently paying too much for rooftop solar exports. Rate design is a zero-sum game. If one group of residential customers pay less, another pays more. APS's non-DG customers pay 14 cents per kWh for rooftop solar energy with net metering, but could pay 4 cents (or lower) for *more valuable* grid-scale solar energy.[13]

That non-DG customers are grossly overpaying for a less valuable product is perhaps why the ROO recognizes the need for "a more precise framework for the fair and appropriate compensation of DG customers for their exports...."[14] To further this stated purpose, APS attaches as Exhibit A a proposed amendment that would permit annual updates to the RCP and Avoided Cost calculations as discussed. This streamlined process of updating the value of DG is consistent with the commencement of a one-time procedure to initially set the formula, to the extent that such a procedure is needed. Annual updates through static formulas would allow for more fair and gradual adjustments to the value of DG. And by limiting the annual updates to processes that only involve verification by Staff, APS's proposal would also reduce the prospect of perpetual litigation over every aspect of the calculation. APS respectfully requests that the Exhibit A to this filing be adopted and incorporated into the final order issued in this docket.

[13] Transcript (Tr.) 365:21 – 366:8 (Albert); *see* Albert Direct Testimony at 27-32 (describing why energy supplied by grid-scale solar facilities is more valuable than the energy supplied by rooftop solar facilities).

[14] ROO at page 146.

III. MORE LITIGATION ON SEPARATE CLASS TREATMENT FOR ROOFTOP SOLAR CUSTOMERS IS NOT NEEDED.

The issue of whether rooftop solar customers should be placed into a separate class was thoroughly litigated in this proceeding. The ROO noted that the appropriate test for whether a subset of customers should be placed into a separate class is whether the load, service, ***or*** cost characteristics of that subset are different from the larger customer group to which the subset belongs.[15] No party contested this test for separate class treatment. Based on the evidence presented, at least two of these independently sufficient factors exist with rooftop solar customers: load and service characteristics.

The evidence presented established that customers with rooftop solar have fundamentally different load characteristics than typical residential customers. By virtue of supplying a portion of their own energy needs, rooftop solar customers are partial requirements customers. In fact, the ROO noted that this conclusion was uncontested: "***[i]t is undisputed that rooftop solar customers are different*** from the average residential customer in that they supply a portion of their own energy needs and are thus partial requirements customers."[16] A necessary extension of their different load characteristics is that rooftop solar customers require different utility services. Staff witness Howard Solganick identified several of these, including standby generation, volt/VAR support, reactive power, and other ancillary services.[17] This conclusion was also undisputed. Critically, the evidence supporting both conclusions was not utility-specific, but instead offered as a general matter.

The ROO adopts an uncontested test for determining separate class treatment, and adopts uncontested facts that meet this test. No more is needed to determine that rooftop solar customers should be in a separate customer class. To delay findings and a

[15] ROO at page 146 (emphasis added).
[16] ROO at page 145 (emphasis added).
[17] Tr. 1362:15 – 1363:12 (Solganick); Tr. 1364:2 – 1367:11 (Solganick); Tr. 1368:7 – 1369:24 (Solganick).

conclusion on this issue would simply kick the can down the road and foster more litigation than is necessary.

APS agrees that the specific consequences of separate class treatment—including the cost ramifications, if any, of that treatment—should be addressed in individual rate cases. The costs for each utility are different, and in fact, separate class treatment might not even result in different costs being allocated to a separate class of rooftop solar customers. But both the test for separate class treatment, and facts needed to satisfy that test, are established and uncontested. In the interest of judicial efficiency, APS respectfully requests that the ROO be modified to reflect, and that the final order issued in this docket find and conclude, that residential rooftop solar customers should be treated as a separate class of residential customers.

IV. CLARITY IS NEEDED REGARDING THE SCOPE AND PROCESS OF THE PROPOSED EVIDENTIARY HEARING.

The ROO contemplates that utilities would provide Commission Staff with data to calculate the value of solar in future rate cases, and that interested parties would subsequently engage in evidentiary hearings to further litigate the value of solar.[18] It is not clear, however, why additional litigation is needed. The ROO acknowledges that this proceeding has been the culmination of years of debate, discussion, commentary, and evidence. The hearing in this matter extended for approximately 3 weeks. Large quantities of testimony were offered from every party and from every perspective. The Commission has moved with caution and great care on this issue, and additional evidence is simply not needed.

Despite the Commission's cautious and careful build up to this proceeding, the ROO appears to require evidentiary hearings on the value and cost of DG in all future rate cases. Yet, near-perpetual litigation over the value and cost of DG is unnecessary and can too easily be abused. Each additional hearing creates new opportunities for parties to claim that there has been inadequate notice (a claim made in this proceeding);

[18] ROO at ¶ 149, pages 168-69.

that data provided was insufficiently transparent (a claim made in this proceeding); or that a separate procedure, like a rulemaking, is a more appropriate process (a claim made in this proceeding).

The possibilities for the proposed evidentiary hearings spawning more (or even perpetual) delay are only limited by the imagination and creativity of the lawyers involved. Indeed, rooftop solar companies and policy organizations have used ***delay as a tactic*** to postpone any decision regarding compensation for rooftop solar. This is because delay has the same effect as a decision to preserve the status quo's subsidies. By recommending that parties re-litigate the value and cost of DG in future rate cases, the ROO would inevitably cause parties to repeat significant portions of the hearing in this matter. This would unnecessarily tax finite resources and risk thwarting the actual substantive decisions that emerge from this hearing.

APS respectfully requests that the ROO be modified to prevent opportunities for delay, or at least blunt opportunities to exploit delay as a litigation tactic, by eliminating or substantially limiting the future evidentiary hearing requirement. APS believes that no further hearings are needed to determine the value of solar. Establishing a value of solar using either methodology proposed by Staff only requires the input of objective, verifiable data, and that Staff in fact verify the data. This is the same process currently used for APS's system avoided cost filing, and is used to establish the rate specified in APS's EPR-2 and EPR-6 rates. Staff's RCP Methodology is even more streamlined, and only involves the review of a relatively limited body of data. No further process, much less further litigation, is needed to calculate a value of solar under either of Staff's proposed methodologies.

APS acknowledges that Staff's RCP Methodology requires a decision regarding a discrete set of assumptions. Specifically, to calculate the value of rooftop solar using the RCP Methodology, the Commission must decide whether to:

(i) use the RFP or in-service date for picking the grid-scale cost (in-service results in a lower value of DG);

(ii) include the Arizona production tax credit in calculating the cost of utility-owned grid-scale solar (including the Arizona PTC reflects actual conditions and would lower the value of DG);

(iii) weight each year in the calculation equally (doing so increases the value of DG by equally weighting earlier, more expensive grid-scale solar);

(iv) levelize the cost of the grid-scale solar, or reflect the actual curve of costs (levelizing third-party and utility-owned DG results in a higher value of DG); and

(v) make an adjustment to reflect that the value of grid-scale solar is more valuable than rooftop solar because it produces significantly more energy during periods of peak customer demand (making the adjustment reduces the value of DG produced by the methodology).[19]

These are important questions that materially impact the outcome of the methodology. Weighting each in favor of increasing the value of rooftop solar produces the value of rooftop solar for APS's service territory identified in the ROO: 10.9 cents per kWh.[20] But resolving these questions requires policy decisions, not redundant evidentiary hearings for each utility. The Commission can determine these issues in connection with issuing a final decision in this proceeding. APS respectfully requests that the ROO be amended to select the assumptions underlying the RCP Methodology. In addition, APS respectfully requests that the Commission modify the ROO to address potential delay related to calculations under the Avoided Cost Methodology as discussed below and in the attached Exhibit B.

If the Commission is not inclined to establish in this proceeding how Staff's Methodologies should be calculated, APS urges the Commission to provide guidance on

[19] APS notes that the parenthetical statements are about calculating an RCP value in APS's service territory only.

[20] *See, generally* Tr. 2095 – 2103; *see also* ROO at page 116.

any follow-on procedure at a minimum. To the extent that the Commission deems it necessary to have another evidentiary hearing regarding the value of DG, APS proposes that the evidentiary hearing occur once, and address any specific foundational questions left unanswered by this proceeding. This one-time proceeding could occur within currently active rate cases (for APS), pending "Phase 2" proceedings for those utilities that have them (such as TEP and UNS), or in standalone proceedings for utilities with no currently-pending rate cases. APS also proposes that hearings regarding the value of solar in future rate cases be strictly limited, and not be opportunities for parties to collaterally attack any outcome established in this proceeding.

Without more guidance on procedure, the parties, and Commission Staff, might never resolve the issues raised in this proceeding. Instead, stakeholders would face the prospect of litigating, re-litigating, and ***then re-litigating again*** every detail of the value of solar. The burden on Commission Staff alone, who must participate in these proceedings for each affected utility, would be immense and, ultimately, an unwise use of resources. APS respectfully requests that Exhibit B to this filing be adopted and incorporated into the final order issued in this docket.

V. CONFIRMATION IS NEEDED THAT THE ROO PROPOSES A SINGLE GRANDFATHERING PERIOD FOR THE VALUE OF DG.

The ROO concludes that any recalculated value of solar would only apply for APS customers who seek to interconnect their rooftop solar system after the effective date of a decision in APS's currently-pending rate case.[21] Based on the plain language of the ROO, APS interprets this grandfathering to occur only once, and that the customers who are *not* grandfathered under the current net metering subsidy structure would sell the energy exported by their rooftop solar system to the utility at a price that changes from time to time as the value of solar is recalculated. To prevent future disputes regarding how to implement this grandfathering structure, APS respectfully requests

[21] ROO at ¶ 154, page 169.

that the Commission clarify the ROO on this issue, and adopt and incorporate Exhibit C to this filing into the final order issued in this docket.

VI. THE ROO APPROPRIATELY RECOGNIZES THE FULL VALUE OF ROOFTOP SOLAR.

Certain parties claim that the only way to recognize the full value of rooftop solar is to quantify the hypothetical benefits that rooftop solar might provide a utility system over the next 20-30 years. The ROO soundly rejects this claim, making clear that periodically recalculating the value of solar does not result in lost value:

> Contrary to the concerns expressed by Vote Solar and TASC, future changes in the value of DG will not be lost due to short-term forecasts, because the value will be re-assessed in each rate case as time goes on, in order to inform the Commission's determination on setting an appropriate compensation rate for exports.[22]

This rejection exposes a foundational flaw in the rooftop solar interests' argument: capturing the full value of solar is not the same thing as levelizing hypothetical benefits that might accrue over the next 20-30 years. A long-term levelized valuation is only one way to value solar. There are many methodologies that capture the full value of solar, including methodologies that involve recalculating the value from time to time, such as Staff's proposed methodologies recommended in the ROO. The ROO's recognition that recalculating value still captures 100% of the value of solar is entirely accurate.

Two other flaws warrant rejecting the long-term speculation in ratemaking urged by rooftop solar interests. First, future hypothetical benefits are not actual value, and it is inappropriate to base compensation for rooftop solar on something that does not exist. TASC's own witness, Tom Beach, admitted that the long-term benefits of rooftop solar are "inherently unknowable."[23] The fact is that ***speculation about future value is not the same thing as actual value***. Rooftop solar interests in this proceeding have not offered any evidence of actual value. Instead, they have only offered predictions about

[22] ROO at page 149.
[23] Tr. 1938:1-21 (Beach).

the fact and magnitude of future benefits based upon an elaborate set of over 30 assumptions of what will happen during the next 20-30 years.

But these benefits haven't happened yet. And it is readily apparent that the value of solar studies underpinning these predictions have been created to engineer a predetermined outcome. The ability to put a thumb on the scale to make long-term forecasts say what you want exemplifies why the U.S. Supreme Court has long rejected the use of speculation in ratemaking.[24] Courts around the country similarly protect utility customers from speculative ratemaking.[25] The ROO reflected this legal guidance when it concluded that "[l]ong-term forecasts should not be used to establish the value of DG, due to the risk of inclusion of speculative benefits and costs."[26]

The second flaw is that academic claims about the value of solar cannot overcome what is actually happening on the grid. Rooftop solar interests use carefully

---

[24] *See West Ohio Gas Co. v. Pub. Util. Comm'n of Ohio*, 294 U.S. 79, 82 (1935); *Missouri ex rel Southwestern Bell Telephone Co. v. Pub. Serv. Comm'n of Missouri*, 262 U.S. 276, 288 (1923) (reversing a public utility commission decision to eschew actual data and rely on forecasts to set a fair return, stating "[e]stimates for to-morrow cannot ignore prices of to-day."); *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 164 (1934) ("Elaborate calculations which are at war with realities are of no avail.").

[25] *Citizens Action Coalition of Ind. v. Pub. Serv. Co. of Ind.*, 612 N.E.2d 199, 201 (Ind. Ct. App. 1993) ("Forcing ratepayers to bear the weight of a calculation based upon speculation is not within the purview of the IURC's authority."); *Mississippi ex rel Allain v. Miss. Pub. Serv. Comm'n*, 435 So.2d 608, 615-16 (Miss. 1983) (rejecting as too speculative a utility rate decision because it was based upon projected figures); *NEPCO Mun. Rate Comm. v. FERC*, 668 F.2d 1327, 1339 (D.C. Cir. 1981) (holding that coal burning costs should not be included in rates because the likelihood of burning coal was too speculative); *Michaelson v. New Eng. Tel. & Tel. Co.*, 121 R.I. 722, 734-36 (1979) ("To factor in changes of unknown magnitude would in most cases increase what speculation already exists in the ratemaking process and thereby tend to undermine the effectiveness of the test-year concept."); *Gen. Tel. Co. v. Mich. Pub. Serv. Comm'n*, 78 Mich. App. 528, 540 (1977) (holding that "the anticipated increases in directory advertising revenues extending beyond the test year were too uncertain to have been credited by the Commission."); *Pittsburgh v. Penn. Pub. Util. Comm'n*, 187 Pa. Super. 341 (361-62 (1958) (holding that evidence concerning events after test year and resulting impact on utility rates was too uncertain and speculative to use in rate setting); *Central Maine Power Co. v. Pub. Util. Comm'n*, 153 Me. 228, 242-43 (1957) (holding that using speculative forecasted costs "would destroy or seriously weaken the effectiveness of the test year, a valued and respected tool in rate making."); *Arlington Cnty. V. Va. Elec. & Power Co.*, 196 Va. 1102, 1118-19 (1955) (rejecting as speculative inclusion of projected savings caused by anticipated change to federal tax rate); *but see Narragansett Elec. Co. v. Harsch*, 117 R.I. 395, 416 (1977) ("in order to neutralize the negative effects of speculation and guesswork about future economic conditions, it is accepted practice to base future rates upon known past and present conditions through the use of data gathered during a specified test period.").

[26] ROO at ¶ 135, page 166.

selected assumptions to claim that exported rooftop solar energy will reduce the need for future generation resources, and along with that reduction, a reduced need for transmission and distribution facilities to transmit remotely-generation power. This theory, however, lies in stark contrast to uncontested facts introduced in this proceeding.

Utilities build their infrastructure to serve peak load, and in 2015, APS's system peak of 7,031 MWs occurred on August 15 at 5 p.m. To supply power to its customers during this peak, APS drew upon its own generation resources and purchased energy from the market. It also used energy exported from customers' rooftop solar systems. The entire amount of energy exported from rooftop solar systems during that hour, however, only amounted to 8.8 MWs on APS's grid. In other words, ***exported rooftop solar energy supplied only .12% of APS's peak resource needs in 2015.***

Rooftop solar interests cannot explain how exported energy will meaningfully reduce future generation capacity if that energy only supplied .12% of APS's peak needs in 2015. Rooftop solar systems simply do not export any significant amount of energy during APS's peak. In an attempt to get around this fact, TASC's witness Tom Beach used sleight of hand by studying *all production* from rooftop solar systems, not just production exported to the grid. The ROO adequately addresses this profound flaw, along with many others in Mr. Beach's opinion, by rejecting Mr. Beach's speculative long-term forecast.

No matter how many ways rooftop solar interests attempt to avoid the facts, they cannot: exported rooftop solar energy will not noticeably reduce APS's need to build more infrastructure—now or in the future. The ROO recommends a valuation methodology that would capture the full value of rooftop solar and avoid the risk to customers inherent in speculative long-term forecasts. Claims about hypothetical benefits over the next 20-30 years are not based on fact; would put customers at risk and inject illegal speculation into ratemaking; and should be rejected on their face.

VII. CONCLUSION

After years of debate and discussion, the wait is over. In this proceeding, parties presented volumes of evidence from various perspectives detailing how things are, predicting how things might be in the future, and supporting their proposals for how things should be instead. The ROO reflects a thoughtful distillation and analysis of that evidence, and concludes that changes to the status quo are needed.

To accomplish that change, the ROO recommends that the Commission adopt Staff's middle ground-proposal. Although this recommendation will still result in significant overpayments for rooftop solar energy, it is nonetheless progress. If the Commission adopts the recommendation, APS urges that the Commission modify the ROO as described above and in the attached exhibits to (i) ensure that changes to the value of DG occur more gradually over time, rather than build up to dramatic changes in future rate cases, for the protection of the solar industry and customers; and, (ii) eliminate, or at least blunt, the creation of perpetual litigation and procedure that will not meaningfully add to the dialogue concerning the value of DG, but will afford opportunities for abuse and delay.

RESPECTFULLY SUBMITTED this 15th day of November 2016.

By: _____

Thomas A. Loquvam
Pinnacle West Capital Corporation
400 North 5th Street, MS 8695
Phoenix, Arizona 85004

and

Raymond S. Heyman
Snell & Wilmer
400 E. Van Buren St. #1900
Phoenix, AZ 85004-2202

Attorneys for Arizona Public Service Company

ORIGINAL and thirteen (13) copies of the foregoing filed this 15th day of November 2016, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing mailed/delivered this 15th day of November 2016 to:

Janet Wagner
Legal Division
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Teena Jilibian
Associate Law Judge
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Thomas Broderick
Utilities Division
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Dwight Nodes
Chief Administrative Law Judge
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Connie Fitzsimmons
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Matthew Laudone
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Maureen Scott
Legal Division
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Brian Smith
Legal Division
Arizona Corporation Commission
1200 W Washington
Phoenix, AZ 85007

Richard Adkerson, CEO
Ajo Improvement Company
333 N. Central Ave
Phoenix, AZ 85004-2189

Tyler Carlson
Mohave Electric Cooperative, Inc.
P.O. Box 1045
Bullhead City, AZ 86430

Roy Archer
Morenci Water and Electric Company and Ajo Improvement Company
PO Box 68
Morenci, AZ 85540

Michael Arnold, Director
Morenci Water & Electric Company
333 N. Central Ave
Phoenix, AZ 85004

Than Ashby, Office Manager
Graham County Electric Cooperative
9 W. Center St
PO Drawer B
Pima, AZ 85543

Nancy Baer
245 San Patricio Drive
Sedona, AZ 86336

Patrick Black
Attorney
Fennemore Craig
2394 East Camelback Road, Suite 600
Phoenix, AZ 85016

Jack Blair
SSVEC
311 E. Wilcox Drive
Sierra Vista, AZ 85635

Bradley Carroll
Assistant General Counsel, State Regulatory
Tucson Electric Power Company
88 East Broadway Blvd.
Mail Stop HQE910
P.O. Box 711
Tucson, AZ 85702

Kirby Chapman
CFAO
Sulphur Springs Valley Electric Cooperative, Inc.
311 E. Wilcox
Sierra Vista, AZ 85650

Karyn Christine
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Jennifer Cranston
Gallagher & Kennedy, P.A.
2575 East Camelback Road
Phoenix, AZ 85016-9225

C. Webb Crockett
Attorney
Fennemore Craig
2394 East Camelback Road, Suite 600
Phoenix, AZ 85016

Jeffrey Crockett, Esq.
Attorney
Crockett Law Group PLLC
2198 E. Camelback Road, Suite 305
Phoenix, AZ 85016-4747

Nicholas Enoch
Attorney
Lubin & Enoch, P.C.
349 North Fourth Ave.
Phoenix, AZ 85003

Patricia Ferre
P.O. Box 433
Payson, AZ 85547

Briana Kobor
Program Director
Vote Solar
360 22nd Street, Suite 730
Oakland, CA 94612

Jason Gellman
Snell & Wilmer LLP
400 E. Van Buren Street, Suite 800
Phoenix, AZ 85004

Rick Gilliam
Director of Research
Vote Solar
1120 Pearl Street, Suite 200
Boulder, CO 80302

Peggy Gillman
Mohave Electric Cooperative, Inc.
P.O. Box 1045
Bullhead City, AZ 86430

Meghan Grabel
Attorney for AIC
Osborn Maledon, P.A.
2929 North Central Avenue
Phoenix, AZ 85012

Garry D. Hays
Attorney for ASDA
Law Offices of Garry D. Hays, PC
2198 E Camelback Rd, Suite 305
Phoenix, AZ 85016

Michael Hiatt
Vote Solar
633 17th Street, Suite 1600
Denver, CO 80202

Timothy Hogan
Attorney
Arizona Center for Law in the Public Interest
202 E. McDowell Road, Suite 153
Phoenix, AZ 85004

Dillon Holmes
Clean Power Arizona
9635 N. 7th Street No 47520
Phoenix, AZ 85068

David Hutchens
President
UNS Electric, Inc.
88 E. Boradway Blvd., MS HQE901
PO Box 711
Tucson, AZ 85701

Charles Kretek, General Counsel
Columbus Electric Cooperative
PO Box 631
Deming, MN 88031

Kevin Larson, Director
UNS Electric, Inc.
88 E. Broadway Blvd, MS HQE910
PO Box 711
Tucson, AZ 85701-0711

Ladel Laub
Dixie Escalante Rural Electric Assn, Inc
71 East highway 56
Beryl, UT 84714-5197

Vincent Nitido
TRICO Electric Cooperative, Inc.
8600 W. Tangerine Road
Marana, AZ 85653

Lewis Levenson
1308 E Cedar Lane
Payson, AZ 85541

Marcus Lewis
Garkane Energy Cooperative
PO Box 65
Loa, UT 84747

Steven Lunt, CEO
Duncan Valley Electric Cooperative
379597 AZ Hwy 75
PO Box 440
Duncan, AZ 85534

Craig Marks
Attorney
AURA
10645 N. Tatum Blvd. Ste. 200-676
Phoenix, AZ 85028

Dan McClendon
Garkane Energy Cooperative
PO Box 65
Loa, UT 84747

Charles Moore
Navopache Electric Cooperative
1878 W. White Mountain Blvd.
Lakeside, AZ 85929

Paul O' Dair
Navopache Electric Cooperative, Inc.
1878 W. White Mountain Blvd.
Lakeside, AZ 85929

Chinyere Osuala
Vote Solar
48 Wall Street, 19th Floor
New York, NY 10005

Michael Patten
Attorney
SNELL & WILMER L.L.P.
One Arizona Center
400 E. Van Buren Street, Suite 1900
Phoenix, AZ 85004-2202

Greg Patterson
Attorney
Munger Chadwick
916 West Adams Suite 3
Phoenix, AZ 85007

Gary Pierson
Arizona Electric Power Cooperative
PO Box 670
1000 S. Highway 80
Benson, AZ 85602

Richard Pitcairn PhD, DVM
Susan Pitcairn, MS
1865 Gun Fury Road
Sedona, AZ 86336

Daniel Pozefsky
Chief Counsel
RUCO
1110 W. Washington, Suite 220
Phoenix, AZ 85007

Pat Quinn
AURA
5521 E. Cholla St.
Scottsdale, AZ 85254

Court Rich
Attorney
Rose Law Group, pc
7144 East Stetson Drive, Suite 300
Scottsdale, AZ 85251

Timothy Sabo
Snell & Wilmer
400 East Van Buren
Suite 1900
Phoenix, AZ 85004

William Sullivan
Attorney
Curtis, Goodwin, Sullivan, Udall & Schwab, P.L.C.
501 E Thomas Road
Phoenix, AZ 85012

Gary Yaquinto
President & CEO
Arizona Investment Council
2100 N. Central Avenue, Suite 210
Phoenix, AZ 85004

Tom Harris, Chairman
Arizona Solar Energy Industries Association
2122 W. Lone Cactus Drive, Suite 2
Phoenix, AZ 85027

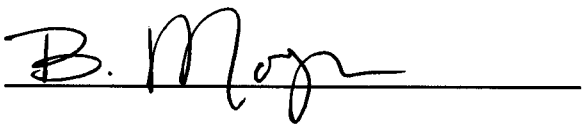

EXHIBIT A

APS PROPOSED AMENDMENT NO. 1

TIME/DATE PREPARED:

COMPANY: Arizona Corporation Commission AGENDA ITEM NO.

DOCKET NO(S). E-00000J-14-0023 OPEN MEETING DATE:

This amendment would permit the Resource Comparison Proxy and Staff's Avoided Cost calculation to be updated annually through a formula process. The formula itself—the assumptions and weighting that drive the final value—would be subject to change in a rate case. It is only the outcome of the formula that would be updated annually, subject to verification of data by Commission Staff. An annual update through a static formula would allow for more fair and gradual adjustments to the value of DG. The amendment also eliminates the need for a separate evidentiary hearing to address the assumptions and inputs of the formula.

Page 148, **DELETE** Lines 12-14

INSERT "We believe that the best and most reasonable option available in the record of this proceeding is our adoption of Staff's combined methodologies creating a formula for establishing the value of DG in each company's rate case with annual updates to the formula inputs. The Commission should have the flexibility to use either the Avoided Cost Methodology or Resource Comparison Proxy Methodology or a combination of both in determining the formula for setting the value of DG."

Page 150, Line 2 after "case"

INSERT "with the inputs updated annually"

Page 151, **DELETE** Lines 15-17 beginning with "Because"

REPLACE with "Therefore we find that updating the value of DG annually would allow for more fair and gradual adjustments and reduce the risk of dramatic changes for customers and the solar industry. However, to provide even greater certainty, we agree with APS's recommendation in its exceptions that the formula itself, including the assumptions and weighting that drive the final value, should only be subject to change in a utility's rate case."

Page 152, Line 18

INSERT new subparts

"d. The Commission may use either the Avoided Cost Methodology or Resource Comparison Proxy Methodology or a combination of both in determining the formula for setting the value of DG. The formula setting the assumptions and weighting of the two methodologies is to be

determined in each utility's individual rate case or separate rate design phase. The formula should only be changed within a rate case to allow parties an opportunity to scrutinize the assumptions and weighting of the methodologies. However, once the formula has been set, the inputs to the formula should be updated annually to provide for more measured adjustments. We believe this will reduce the risk of dramatic changes to customers and the solar industry and is consistent with our interest in rate gradualism."

"e. The utility shall provide the updated data inputs and a recalculated value of DG in an annual compliance filing. Within 45 days of that filing, Staff shall review and verify the accuracy of the data and recalculation. The updated data will be inputted into the utilities' previously approved value of DG formula. The new value of DG will automatically become effective after 45 days unless there is further action by the Commission.

For comparison purposes, a formula for a value of DG under the Avoided Cost Methodology will be established, and subject to change in the rate case. At the same time they update the Resource Comparison Proxy formula, utilities will update the inputs to the Avoided Cost Methodology. The value of DG shown by the Avoided Cost Formula will inform the trajectory of the value of DG, but will not be used to set compensation paid to customers for energy exported by their DG systems."

Page 153, **DELETE** Lines 5-6

REPLACE with "File a Staff Report verifying the accuracy of the data provided by the utility."

Page 167, Line 8, after "case"

INSERT "and the inputs are updated annually"

Page 167, Line 14, after "case"

INSERT "and the inputs are updated annually"

Page 167, **DELETE** Lines 15-17

REPLACE with "A re-assessment of the value of DG formula in each electric utility rate case with annual updates to the formula inputs in order to inform compensation rates to be paid for DG exports ensures a gradual transition from the current net metering compensation model to compensation that reflects the actual value of DG."

Page 167, **DELETE** Lines 18-20

REPLACE with "A re-assessment of the value of DG formula in each electric utility rate case with annual updates to the formula inputs in order to inform compensation rates to be paid for DG exports precludes the need for the implementation of a separate step-down mechanism."

Page 168, Line 23

INSERT new finding of facts

"149. d. The Commission may use either the Avoided Cost Methodology or Resource Comparison Proxy Methodology or a combination of both in determining the formula for setting the value of DG. The formula setting the assumptions and weighting of the two methodologies is to be determined in each utility's individual rate case or separate rate design phase. The formula should only be changed within a rate case to allow parties an opportunity to scrutinize the assumptions and weighting of the methodologies. However, once the formula has been set, the inputs to the formula should be updated annually to provide for more measured adjustments. We believe this will reduce the risk of dramatic changes to customers and the solar industry and is consistent with our interest in rate gradualism."

"150. The utility shall provide the updated data inputs in an annual compliance filing. Within 45 days of that filing, Staff shall review and verify the accuracy of the data. The updated data will be inputted into the utilities' previously approved value of DG formula. The new value of DG will automatically become effective after 45 days unless there is further action by the Commission."

Page 169, **DELETE** Lines 1-2

REPLACE with "File a Staff Report verifying the accuracy of the data provided by the utility."

Make all conforming changes.

EXHIBIT B

APS PROPOSED AMENDMENT NO. 2

TIME/DATE PREPARED:

COMPANY: Arizona Corporation Commission AGENDA ITEM NO.

DOCKET NO(S). E-00000J-14-0023 OPEN MEETING DATE:

This amendment clarifies the scope for future value of DG evidentiary proceedings. An initial evidentiary hearing shall occur once for affected utilities to resolve foundational issues regarding the Resource Comparison Proxy and Avoided Cost Methodologies. This initial hearing will occur within the existing rate cases, currently-planned Phase 2's, or standalone proceedings for utilities with no pending rate cases, as applicable.

Page 153, Line 5 after "Evidentiary Proceedings."

INSERT "These initial evidentiary hearings will not be the forum to re-litigate any issue decided in this proceeding. Instead, they will resolve any open questions regarding how the valuation methodologies adopted in this decision be implemented for each utility. These issues should be limited to utility-specific issues, such as the cost incurred for grid scale facilities in relation to the Resource Comparison Proxy Methodology, and the costs forecasted to be avoided over the next five years in relation to the Avoided Cost Methodology."

Page 153, Line 6

INSERT a new subpart

"g. We are mindful of the Commission's limited resources and the burden created on Staff and the Hearing Division by having evidentiary proceedings within evidentiary proceedings. We are also concerned about the potential delay created by having multiple evidentiary proceedings and are aware of our obligations to comply with our well-established rate case time clock rules. Therefore, we believe that if a separate evidentiary proceeding on the value of DG is necessary, the scope must be reasonably limited to take into consideration the outcomes already decided in this Decision, including the use of Staff's Avoided Cost methodology and Staff's Resource Comparison Proxy Methodology or a combination of the two. These separate evidentiary proceedings should not be taken as opportunities for parties to collaterally attack the outcomes established in this Decision."

Page 169, Line 2 after "Proceedings."

INSERT "These initial evidentiary hearings will not be the forum to re-litigate any issue decided in this proceeding. Instead, they will resolve any open questions regarding how the valuation methodologies adopted in this decision be implemented for each utility. These issues should be limited to utility-specific issues, such as the cost incurred for grid scale facilities in relation to the

Resource Comparison Proxy Methodology, and the costs forecasted to be avoided over the next five years in relation to the Avoided Cost Methodology."

Page 169, Line 3

INSERT a new finding of fact

"150. We are mindful of the Commission's limited resources and the burden created on Staff and the Hearing Division by having evidentiary proceedings within evidentiary proceedings. We are also concerned about the potential delay created by having multiple evidentiary proceedings and are aware of our obligations to comply with our well-established rate case time clock rules. Therefore, we believe that if a separate evidentiary proceeding on the value of DG is necessary, the scope must be reasonably limited to take into consideration the outcomes already decided in this Decision, including the use of Staff's Avoided Cost methodology and Staff's Resource Comparison Proxy Methodology or a combination of the two. These separate evidentiary proceedings should not be taken as opportunities for parties to collaterally attack the outcomes established in this Decision."

Make all conforming changes.

EXHIBIT C

APS PROPOSED AMENDMENT NO. 3

TIME/DATE PREPARED:

COMPANY: Arizona Corporation Commission AGENDA ITEM NO.

DOCKET NO(S). E-00000J-14-0023 OPEN MEETING DATE:

This amendment makes clear that customers who are *not* grandfathered under the current net metering subsidy structure would sell the energy exported by their rooftop solar system to the utility at a price that changes from time to time as the value of DG is recalculated.

Page 154, Line 1 after "rate case."

INSERT "In an effort to provide an abundance of notice and clarity, we further explain that the new export compensation rate may change from time to time as the value of DG is recalculated. DG customers that are not grandfathered under the currently implemented rate design and net metering construct will sell the energy exported by their rooftop solar system to the utility at a price that is subject to periodic recalculations.

Page 171, Line 6 after "rate case."

INSERT "In an effort to provide an abundance of notice and clarity, we further explain that the new export compensation rate may change from time to time as the value of DG is recalculated. DG customers that are not grandfathered under the currently implemented rate design and net metering construct will sell the energy exported by their rooftop solar system to the utility at a price that is subject to periodic recalculations.

Make all conforming changes.